

Strategic Plan for



Adam Drewnowski, PhD

**School of Public Health and Community Medicine
University of Washington**

**NIH Interdisciplinary Research Centers Workshop
Bethesda, February 9, 2006**

Strategic Plan for

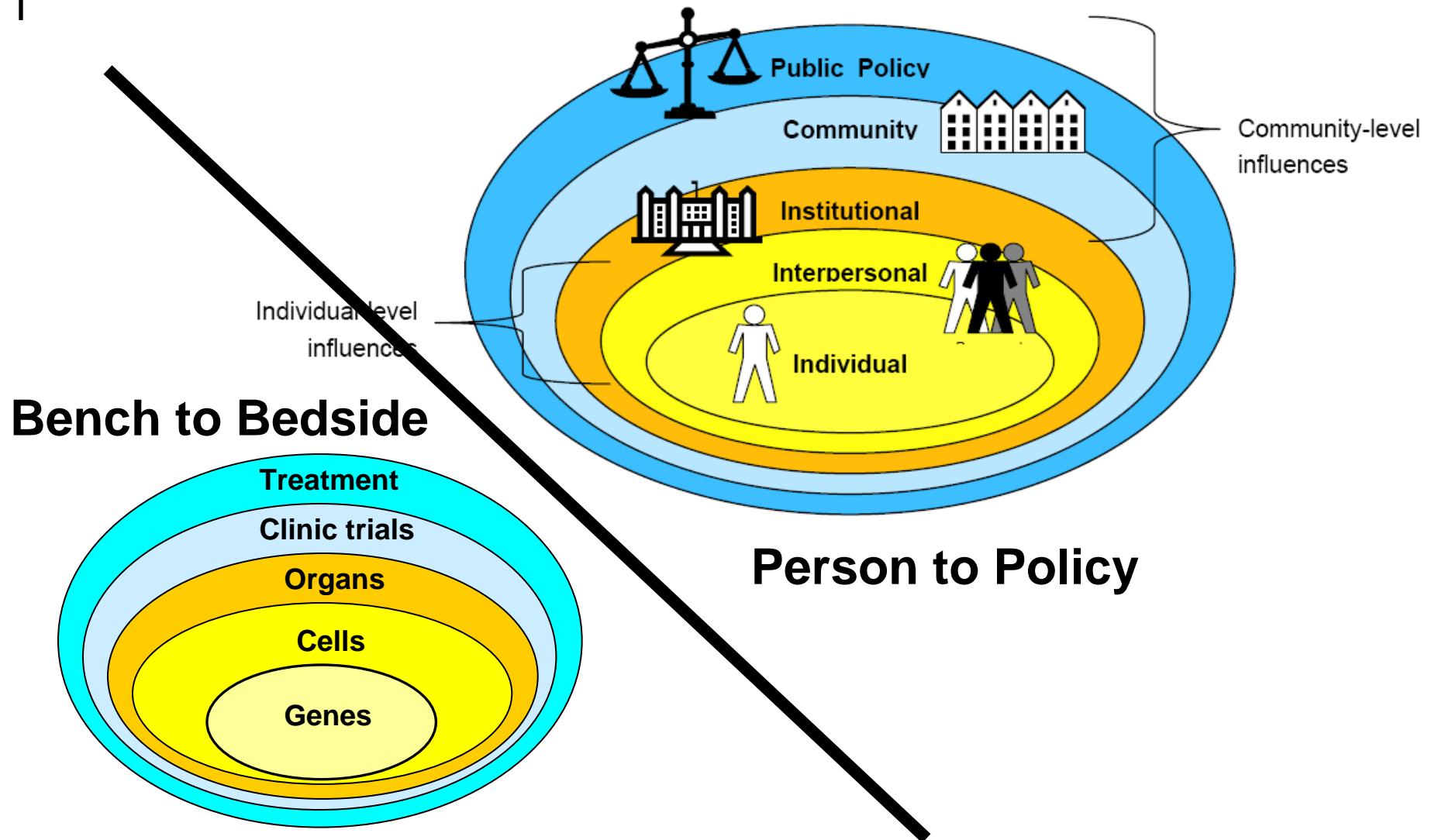
UNIVERSITY of WASHINGTON

OBESITY RESEARCH



Exploratory Center for Obesity Research
An NIH Roadmap Initiative

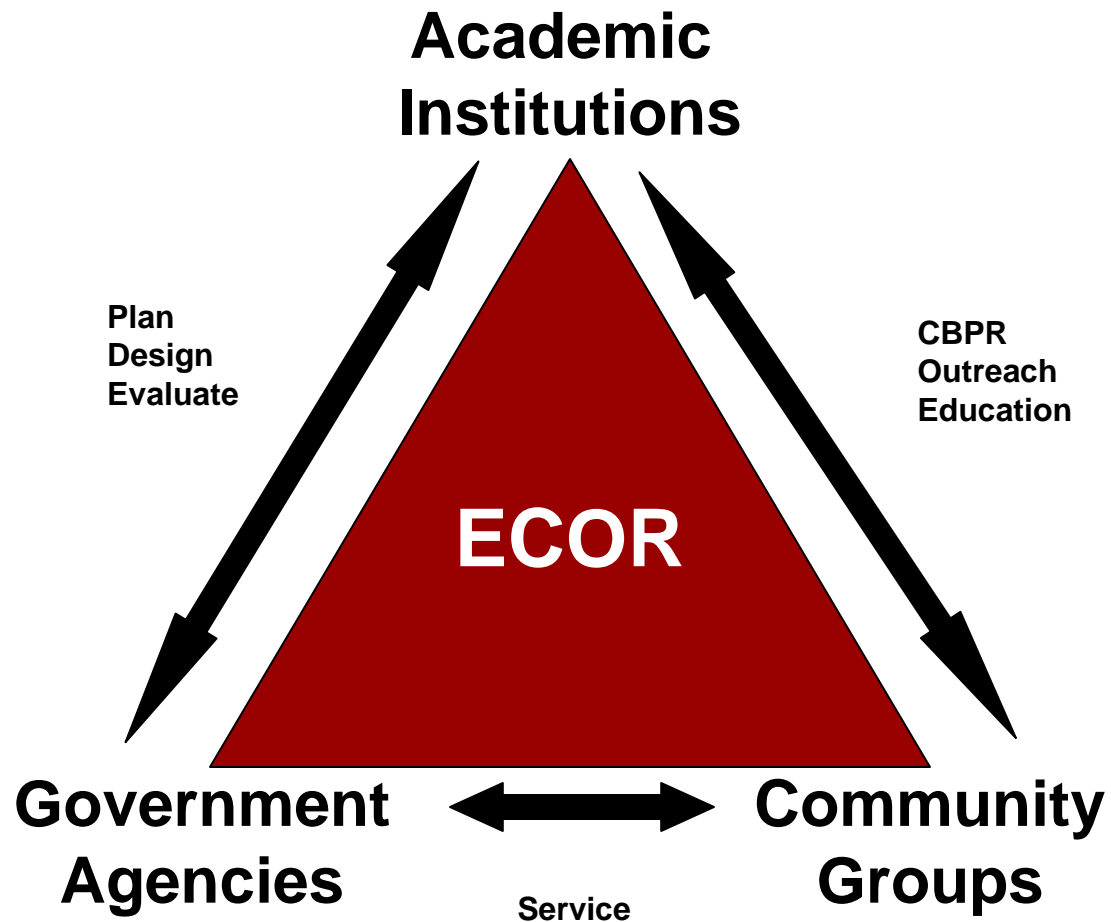
Discipline and Institutional Barriers



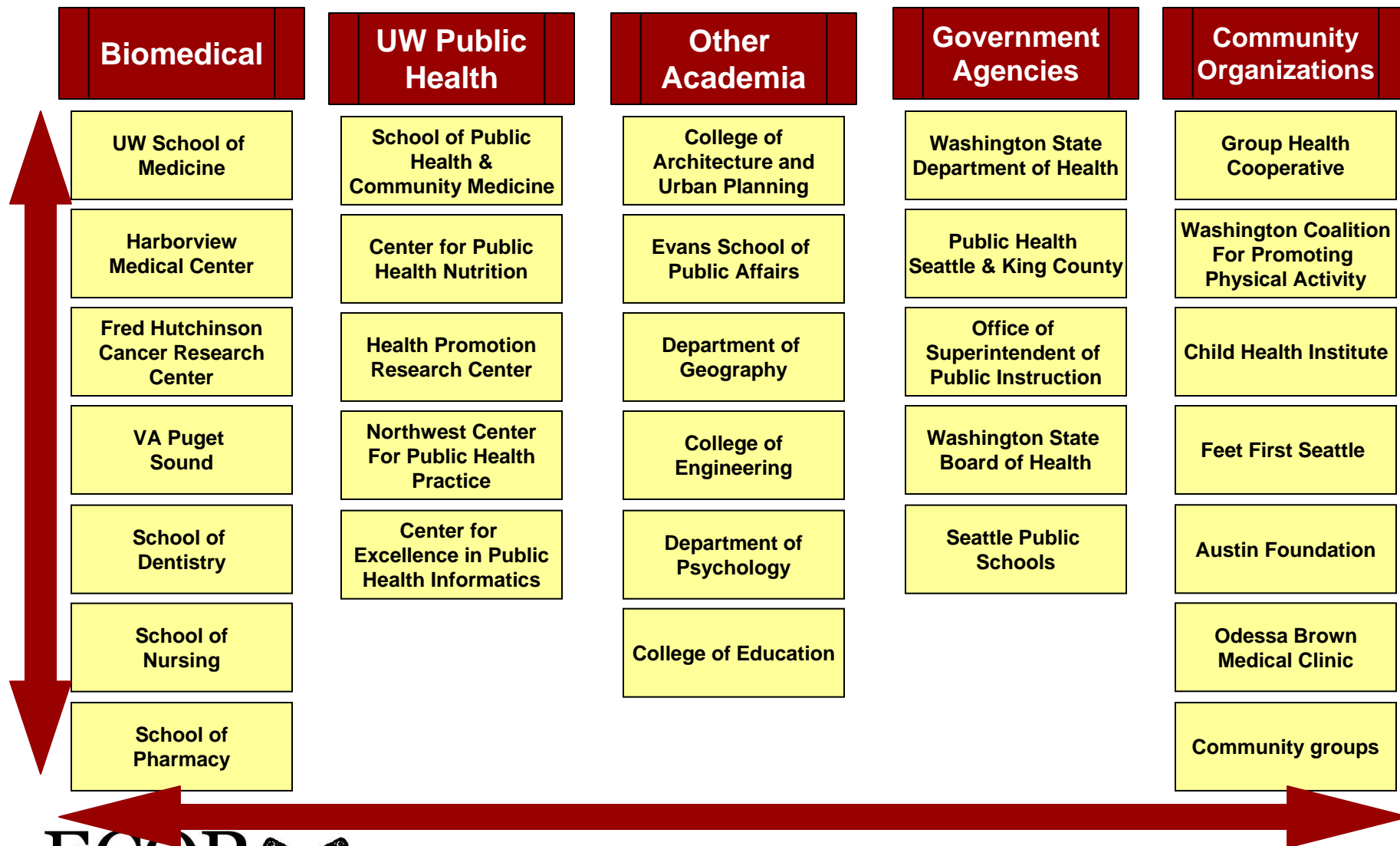
Basic Research to Policy – and Back



Integration: Bench to Bedside—and Beyond

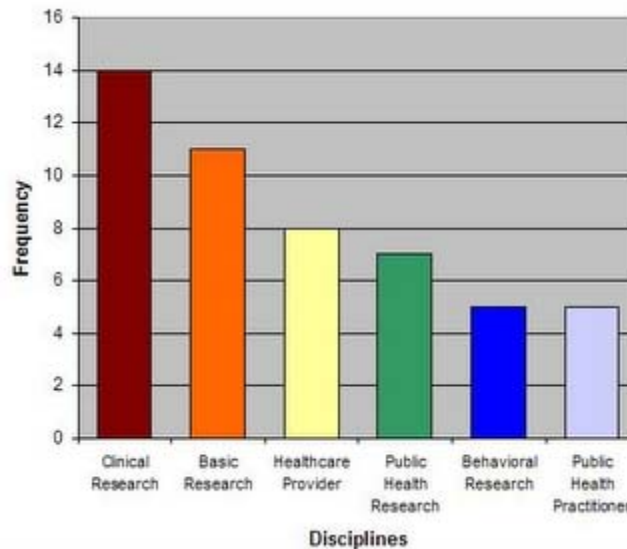



UW Research Setting



How to establish shared goals and common language

- Methods workshops
- Symposia
- Seminars
- Strategic planning meetings
- Website
- PF grants



ECOR 
UW Exploratory Center for Obesity Research

University of Washington • School of Public Health • Center for Public Health Nutrition

New Teams.
Real Solutions.

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Consortium Planning (Restricted Access)

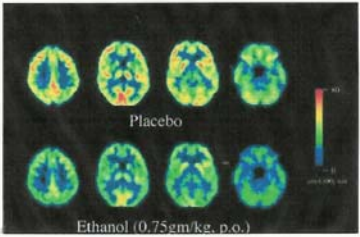
Your Brain on Food: Food Reward and Obesity

February 23, 2006, Henry Art Gallery Auditorium, University of Washington

[Agenda](#)
[Click Here to Register](#)
[Map](#)
[Learning Objectives](#)

In addition to providing calories for sustenance, food is a strong natural stimulus to brain areas that mediate motivation and reward. Our brain circuitry has evolved to ensure a drive for eating as a critical survival behavior in both animals and early human civilizations. Contemporary Westernized society is confronted with a highly convenient and accessible supply of highly palatable foods that are high in energy density and that contribute to the excessive caloric consumption, which is believed to be at the root of the current 'obesity epidemic.' For the past 20-25 years, basic research and clinical therapeutic efforts have focused almost exclusively on how the brain mediates energy regulation in the context of survival. It is agreed that 'unregulated eating' in response to food hedonics and stress is probably at least as important in determining human food intake, and that functional circuitry is present in the mammalian brain to allow these aspects of feeding to override regulatory controls. In light of this evidence, it seems critical to understand the functioning of this circuitry, in order to develop rational new therapeutic and behavioral strategies to modify food intake patterns and perhaps the hedonic value of food itself.

This session has been pre-approved by the American Dietetic Association for 5 CPEUs for Registered Dietitians and Dietetic Technicians.



Building and Sharing Methodologies

■ Workshops

□ Mobile sensors – Wi-Fi technology

- Computer Science, Intel, Urban Form Lab

□ GIS and the geography of obesity

- Architecture, Geography, Epidemiology, PH-S&KC

□ Measuring dietary intake of children

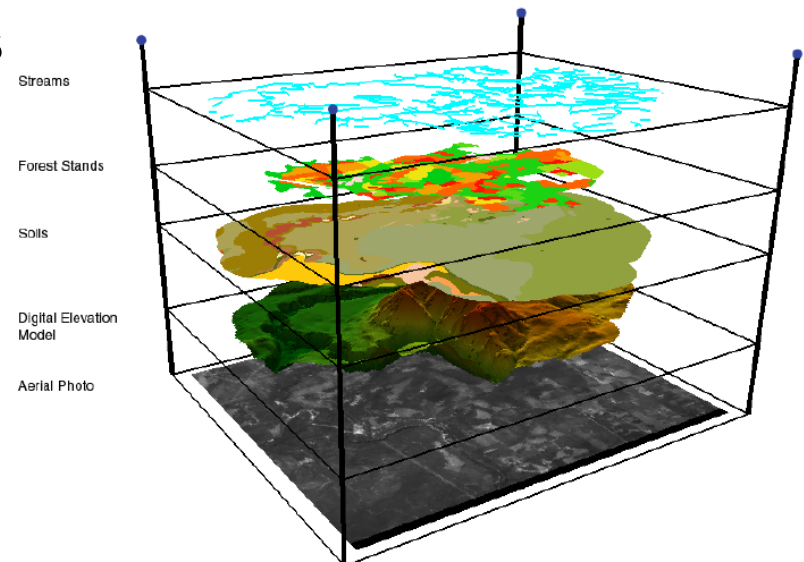
- USDA Beltsville, USDA Baylor, CDC,

□ Policy development processes

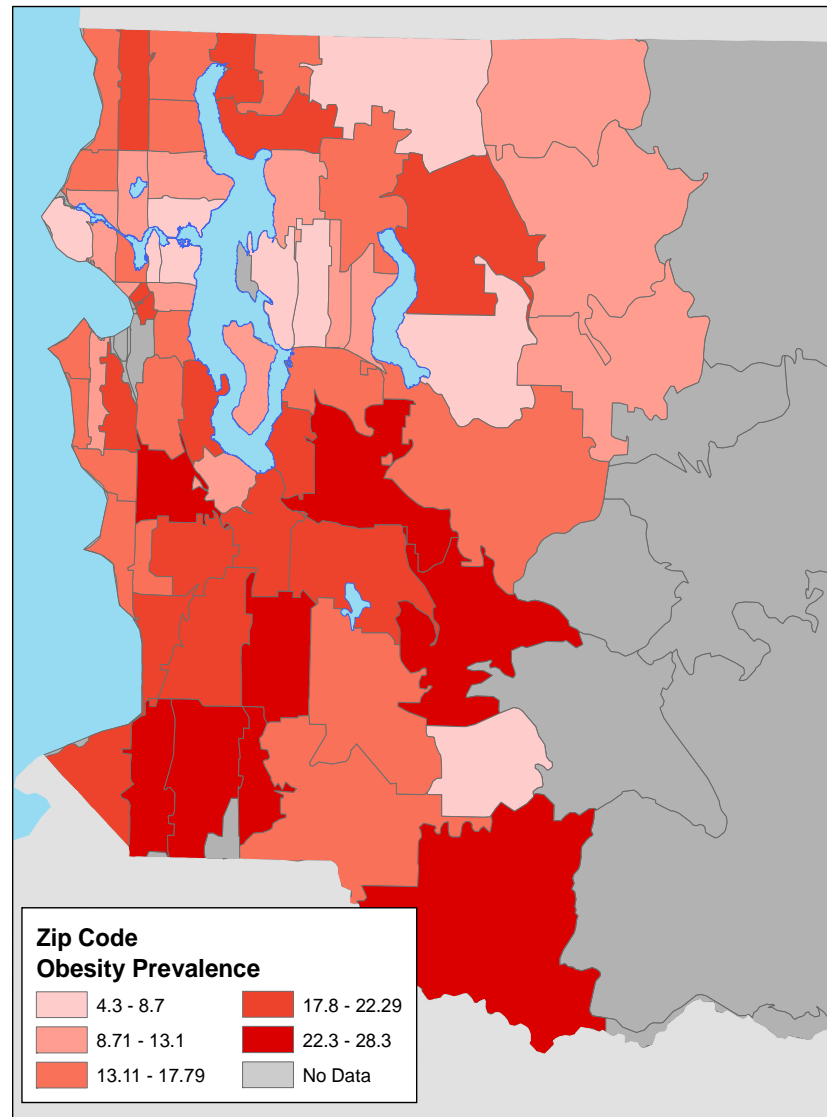
- Evans School of Public Affairs

■ Identify Research Interfaces

- GIS as metaphor

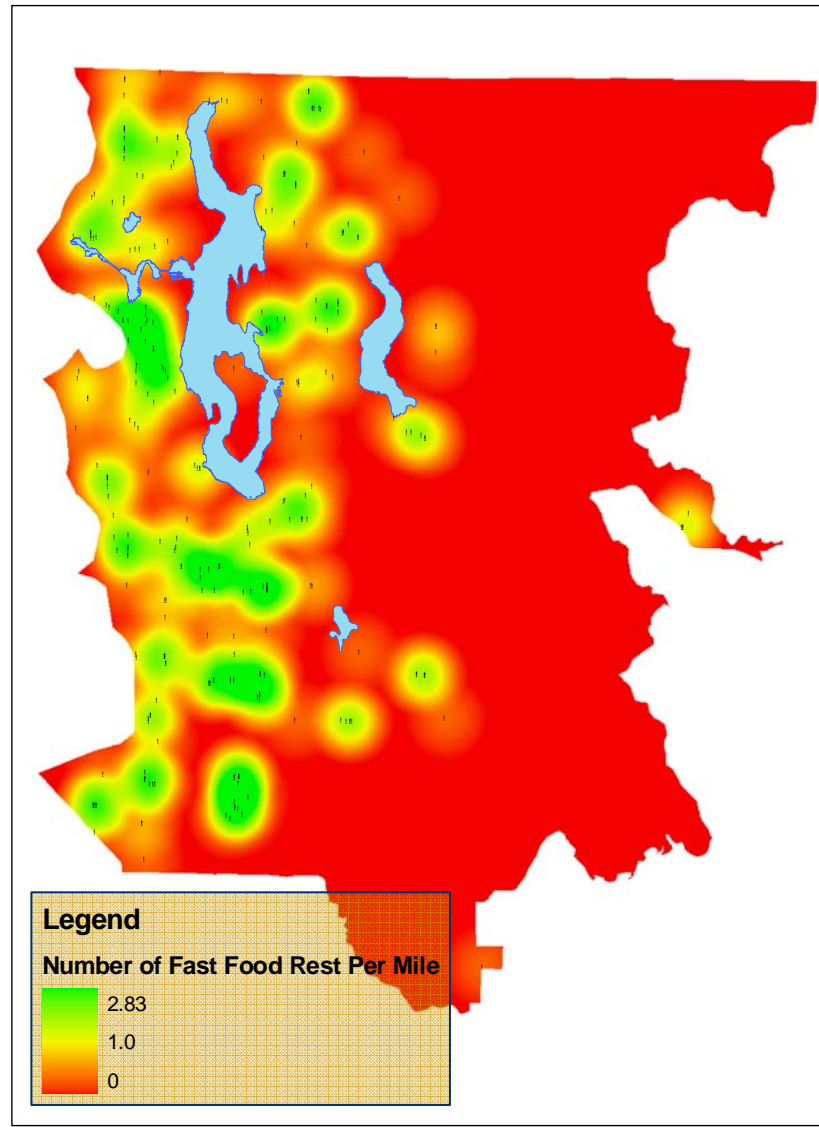
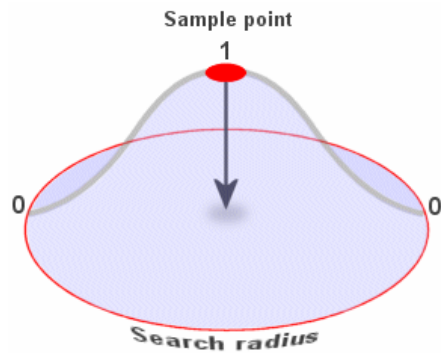


Mapping obesity rates by Zip Code Area



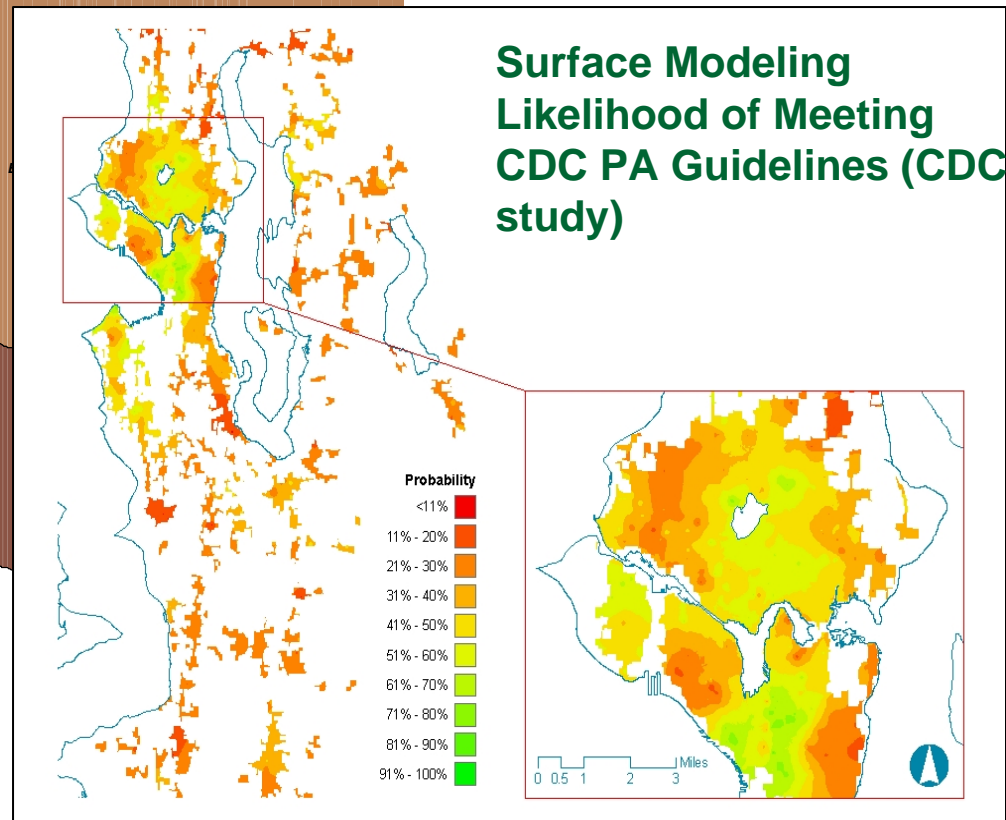
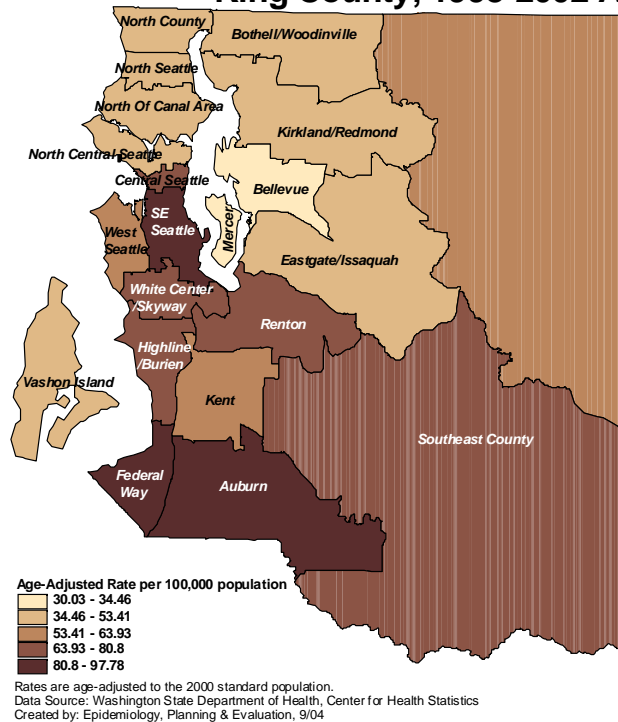
Data from BRFSS
analyzed by EPE Unit
of PH-S&KC

Mapping access to foods – data from UFL



Mashup with public health surveillance data and surface modeling of walkability

Diabetes-Related Mortality by Health Planning Area,
King County, 1998-2002 Average



Symposium – *Metabolic Imprinting: Maternal Effects on Subsequent “Diabesity” Risk*

Epidemiologic Evidence for Epigenetic Transmission of Diabetes

The Dutch Hunger Winter and Beyond

D. Scott Weigle, M.D.
ECOR Special Symposium
November 17, 2005

Genetic and Perinatal Factors Which Promote Obesity and Metabolic Disease

Barry E. Levin, MD
NJ Medical School/ UMDNJ
VA Medical Center, E. Orange, NJ
USA

Neonatal Nutrition and Adult Obesity

Daniel L. Marks M.D., Ph.D.
Pediatric Endocrinology
Doernbecher Children's Hospital
Center for the Study of Weight Regulation
Oregon Health Sciences University

The effects of maternal and postnatal diet on the development of obesity and the metabolic syndrome.

Kevin Grove
Oregon National Primate Research Center, OHSU



Childhood Obesity



Fetal/Neonatal Imprinting?



ECOR symposium, Univ. of Washington, Nov. 17th, 2005

Molecular mechanisms of genetic imprinting and epigenetic transmission of traits: The model of Prader-Willi syndrome

Robert D. Nicholls, D.Phil.
robert.nicholls@chp.edu

Director, Birth Defects Laboratories
Department of Pediatrics, Div. of Medical Genetics
Children's Hospital of Pittsburgh
Pittsburgh, PA

Getting Off to a Good Start: Public Health Policies to Help Pregnant Mothers

ECOR
November 17, 2005
Maxine Hayes, MD, MPH
State Health Officer
Washington State Department of Health

Symposium – February 23, 2006

Your Brain on Food: Food Reward and Obesity

Learning Objectives:

- Identify critical brain areas for regulation of energy balance and the preference for sweet taste.
- Identify brain mechanisms that underlie the enhancement of psychostimulant reward
- Review evidence demonstrating effects of nutritional status on brain reward function
- Identify elements of patterns of human brain activation with eating and drug-taking.

Speakers

Allen S. Levine, PhD (University of Minnesota)

Sugars: hedonic aspects, neuroregulation, and energy balance

Kenneth D. Carr, PhD (New York University)

Food restriction: enhancing effects on drug reward and striatal cell signaling

Dianne Figlewicz Lattemann, PhD (UW)

Food reward and modulation by nutritional status, insulin, and leptin

Gene-Jack Wang, MD (Brookhaven National Lab)

Human brain imaging: parallels between feeding and drug taking and implications for obesity

Sue Coldwell, PhD (UW)

Developmental and physiological influences on taste preference and perception in human adolescents

Elissa Epel, PhD (UCSF)

Stress-induced eating in contemporary society: neuroendocrine responses, mood, and taste preferences

David Kessler, MD (UCSF)

What tobacco has taught us about strategies for obesity prevention

Seminar Series

Obesity Prevention: Research to Policy

Learning Objectives:

- Apply terminology related to the study of obesity prevention in the U.S.
- Describe basic, clinical, and public health approaches to obesity-related research.
- Discuss approaches and barriers to obesity prevention among various groups in the U.S.
- Evaluate the scientific literature related to the broad area of obesity prevention.
- Understand concepts related to the multi-faceted nature of the obesity epidemic in the U.S.

Speakers

John Brunzell, MD

Recidivism after weight loss

Karen Foster-Schubert, MD

Ghrelin and the regulation of body weight and glucose homeostasis

Lenna Liu, MD, MPH

On the front line: obesity in minority youth

Deb Bowen, PhD

Community interventions for obesity

Phil Hurvitz, MFR

Spatial epidemiology and obesity risk

Dimitri Christakis, MD

Screen time and poor eating habits in children

Scott Weigle, MD

Human diet studies on body weight regulation

Jan Norman, RD, CDE

Using environment and policy approaches to address obesity

Laura Streichert, PhD, MPH

Transdisciplinary strategies for obesity research

Pilot and Feasibility Studies

- 6 projects awarded (\$15,000-\$20,000 each).
- Majority of PIs are clinician-scientists.
- New interdisciplinary teams.
- Training for young investigators in interdisciplinary research.



Translating to Practice and Policy

- **King County Obesity Prevention Initiative Forums**
- **Work groups identified priority public health needs and created strategies**
 - ❑ **Nutrition**
 - ❑ **Physical Activity**
 - ❑ **Built Environment**
 - ❑ **Media**



Adam Drewnowski

ECOR PI

Maxine Hayes

Health Officer – State of Washington

Ron Sims

Chief Executive - King County

Dorothy Teeter

Director, Public Health – Seattle & King County

King County 10-Point Plan for Obesity Prevention

Communications

1. Carry out a community-wide campaign to promote healthy eating and active living, including messages designed to motivate families to reduce individuals' and children's TV and screen time.

Nutrition and physical activity

2. Assist school districts' development and implementation of nutrition and physical activity policies.
3. Enhance employers' efforts to promote nutrition and physical activity through work site wellness programs, starting with school and King County employees as model worksites.

Nutrition

4. Encourage breastfeeding friendly policies at worksites and child care facilities.
5. Support the adoption of guidelines, best practices and policies that promote nutrition standards, appropriate portion sizes and healthy food choices.

Physical activity

6. Support the implementation of "Safe and active routes to schools and transit" programs.
7. Support greater use of private and public facilities for physical activity, starting with community and senior centers and schools.

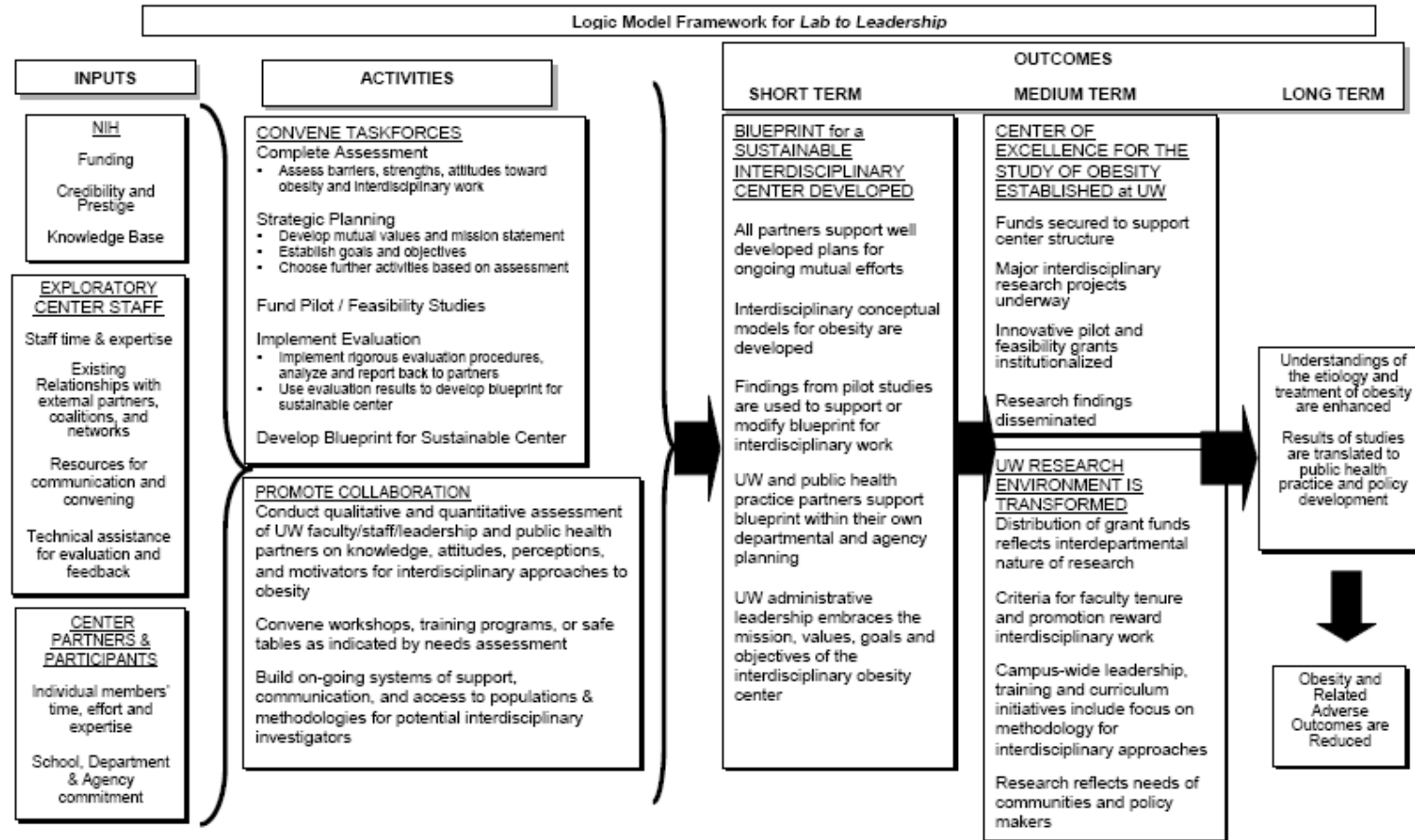
Design for active living

8. Support the completion of missing pedestrian and bicycle links in King County.
9. Promote the development and use of checklists on standards of active community design.

Research

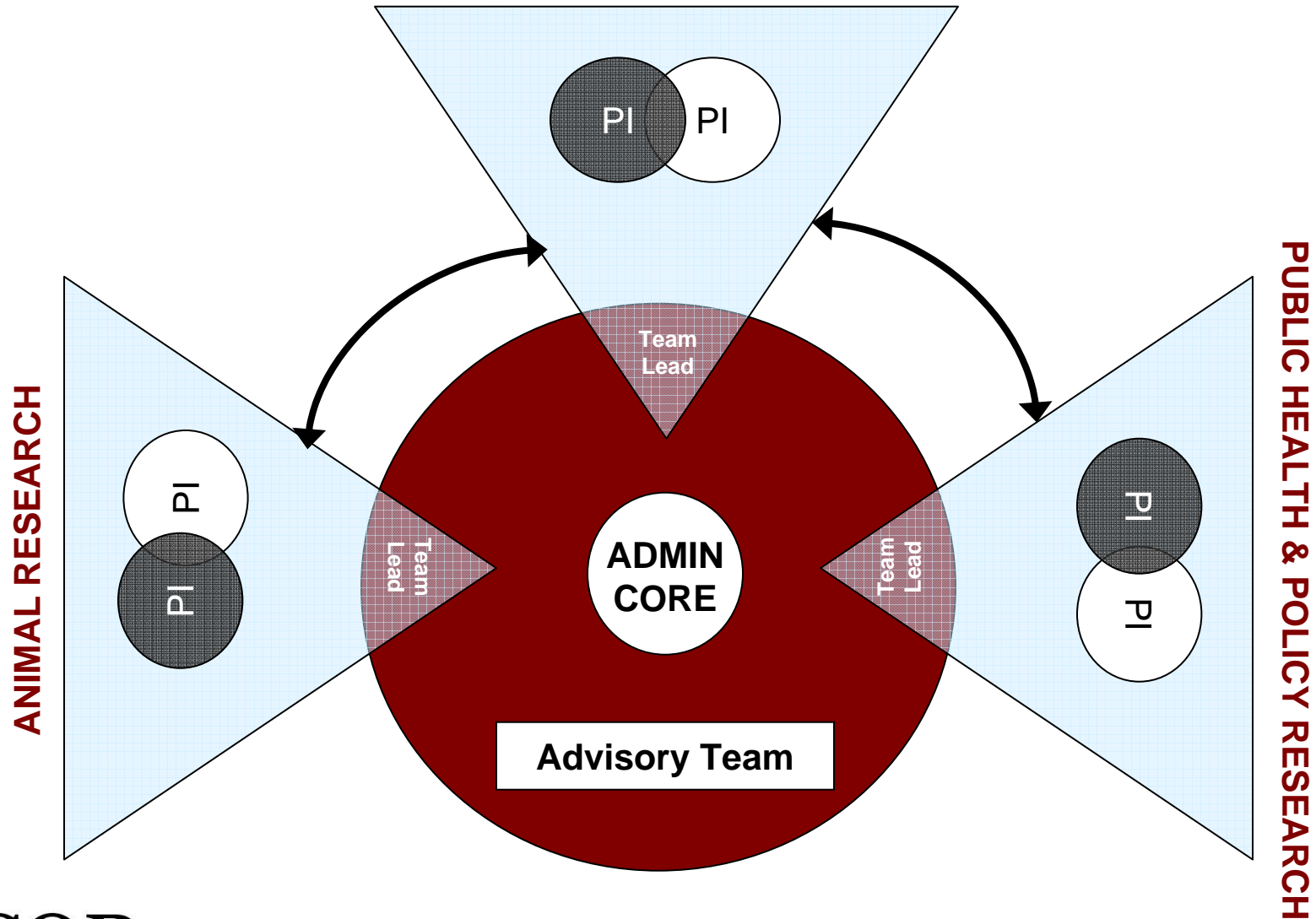
10. *Partner with academia and our communities to promote evidence-based practices and evaluate and disseminate results regularly and rapidly.*

Logic Model and Self-Evaluation



Planned UW Consortium for Obesity Research

CLINICAL/HUMAN RESEARCH



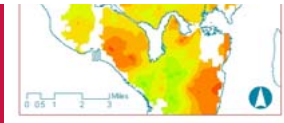
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New teams. Real solutions.



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